

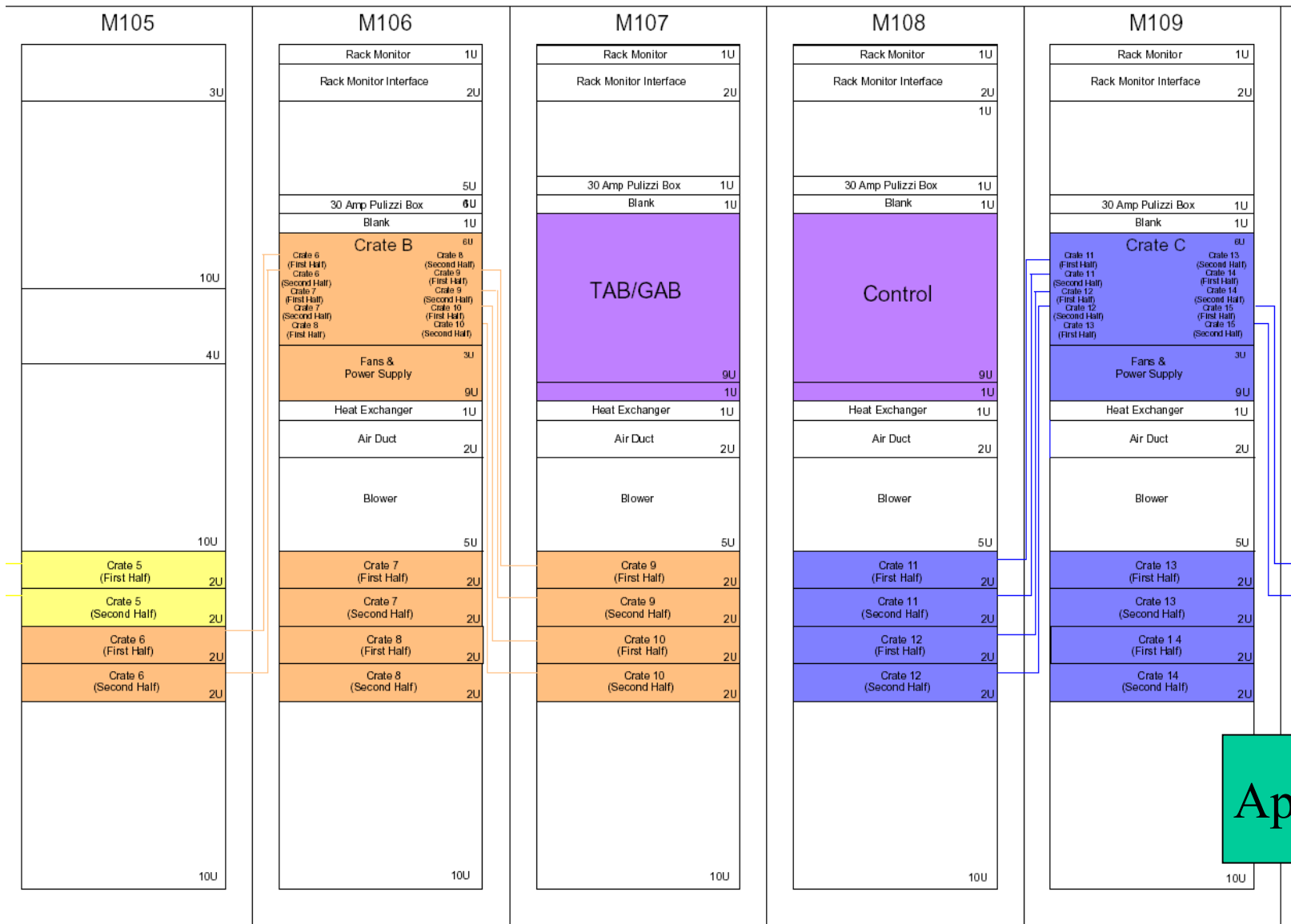


# Special Mtg on 2 Sep 2004

- In attendance: Nikos, Mario, me, John Anderson, John Fogelsong, Johnny Green, Dan Edmunds
- Layouts of Patch Panel and Paddle Cards are completed
  - Submitted to Pentaplex Printed Circuits on Sept 7<sup>th</sup>
  - Received this morning
    - Will stuff at Fermilab - should have them by Monday
- Rack layout schematic with cooling & safety completed
  - Test stand racks will be cooled with fans/blowers & ambient air
  - MCH1 racks will need water & heat exchangers
- Reusing MCH1 racks is currently favored
  - At beginning of shutdown in 2005, all racks will be stripped down to their frames, including power lines to breakers and water hoses
  - Existing cables are in front external to the rack frame
    - Will not need to be touched or rerouted



# MCH1 Rack Layout



Approved!



# L1 CAL Test Stand



- Outside of MCH1, next to pit
- Test stand area has wooden platform floor to prevent any ground shorts
- Moved my cabinet to the area
  - Has combination lock to secure tools
- Need to rearrange racks and desks
  - Have to disconnect some cables
  - Position racks in an “L” shape
- Mario has been working on the mock-up of patch panels and cables
  - More in his presentation
  - Consulting frequently w/John Fogelsong
  - Redesign of the patch panel was necessitated because:
    - Patch panel cards won't fit with the drawer chassis
    - Reusing racks & not rerouting cables conflicts with BLS connectors position on patch panel cards
      - Inside vs Outside



# Mechanical Mock-up To Do List

- This is a very non-trivial task.
  - More than just getting the cable lengths
  - Requires trial and error
  - Do it now. Get it right. Work out the kinks.
  - Document. Words and pictures. D0 Note?
- Expanding to four patch panels instead of two
  - Two in the racks adjacent to an ADF rack
  - Using the proper labelling and cable/channel map
- Working on routing and strain relief
  - Using velcro, plastic ties and mounts to simulate clamps and connectors
  - Plastic cable chutes on front of rack just as in MCH1 racks
- Expanding to full ADF backplane cable simulation
  - Requires 40 cables. How does one do this?





# Mock-up Pictures



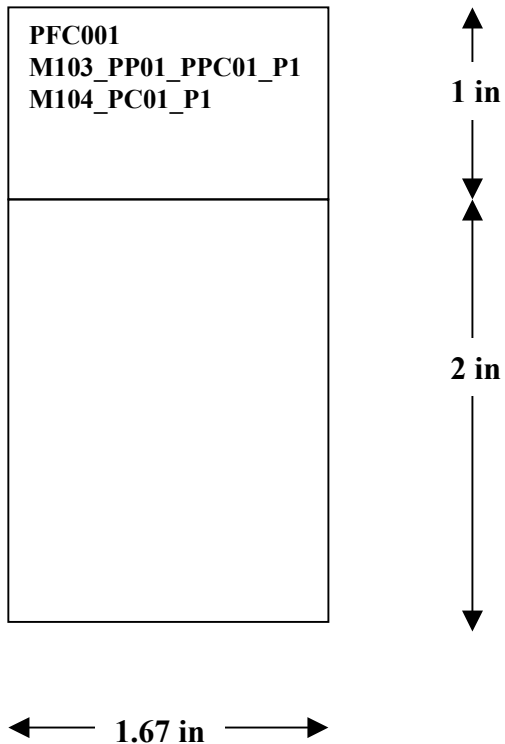


# Electrical & Signal To Do List

- Still in its infancy
  - Mario did some setup work getting the scope, pulse generator, cables and connectors. Looked at an example cable signal.
- We have 9 pleated foil cables
  - Continuity, signal integrity & impedance tests are needed
- Patch panel and paddle cards arrive next week
  - Same tests as pleated foil
- Test individual components first
  - Validate the channel map - each conductor and ground
- Build the complete BLS-to-ADF transition system chain
  - Can use pulse generator
  - Once L1 CAL racks are back on, could use the cables from the splitter board and send signals from calorimeter
    - Cosmics, preamp pulser
- Sign off on prototype design
  - Or iterate with a redesign



# Label Update



- Label name, Origin, Destination
- Pleated Foil (left): 160 x 2
  - One label for each end of 10 foot cables
    - PFC001 = Pleated Foil Cable 1 (of 160)
    - M103 = MCH Rack 103 (103-112)
    - PP01 = Patch Panel 1 (of 40)
    - PPC01 = Patch Panel Card 1 (of 2)
    - P1 = Connector 1 (of 2)
    - PC01 = Paddle Card 1 (of 80)
- BLS Trigger: 1280 x1
  - Cannot access platform end of detector
  - Will not remove or cover old labels
- No progress. Trying new company.
  - Spoke with salesperson yesterday.
  - She will send samples shortly

Need to get this done before the end of the shutdown!!



# Summary

- There is a lot of preliminary work to do
  - Infrastructure mock-up, Electrical, Labelling
- The engineers cannot do this testing for us
  - They can help with the design and the setup, but we need to determine if it works, meets our goals and obeys the constraints
- We are not behind schedule, but:
  - Labelling (2-3 day job) needs to be done by mid-to-late October
  - Mock-up needs to be completed as soon as reasonably possible
    - Cannot rush so the job is inadequate, sloppy or incomplete
    - However, other design decisions depend heavily on the outcome of the mock-up
      - Patch panel, patch panel card, new vs old racks
    - A short but detailed D0 Note may be appropriate
      - Reviewed by L1 CAL group and engineers
      - Request written approval
  - Electrical testing must be done to look for problems
    - Dan Edmunds needs to be consulted after preliminary testing is completed.
    - I would not proceed with full production until Dan gives the thumbs up
    - Steady full-time work. Cannot drag on for months.
- No shortage of tasks. Extra help would be welcomed.